KELLY (H.A.)

# Discussion on the New Cæsarean Section.

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# DISCUSSION ON THE NEW CAESAREAN SECTION.

Dr. Howard A. Kelly, of Philadelphia, was called upon by the President to open the discussion.

Dr. Howard A. Kelly, of Philadelphia.—Your call upon me, Mr. President, is so utterly unexpected that I rise with much hesitation to discuss this most important question.

I must, first of all, congratulate Dr. Lusk upon his wonderful success in these three cases, breaking America's bad hospital record, and proving that even in our big public hospitals this greatest capital operation can be conducted with safety. My own experience this year embraces two cases, one operated upon in private, the other in the Kensington Hospital for Women, both also successful. The first case was one of extreme interest, as the patient had been two weeks in labor, and the waters had ruptured four days before the operation; yet, in spite of her condition, she made a rapid and almost undisturbed recovery.

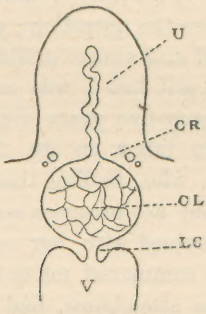
Upon the 17th of April last I was called to see Mrs. J., a delicate American, twenty-five years old, four feet four inches in height. She fell in labor on the third instant, and was attended by a midwife, who, finding that she had very strong pains and that labor did not progress, sent, after five days, for her physician, who remained with her more or less constantly until the 17th, when he summoned me to operate. Drs. Ireland and Starck, who were in attendance, had made careful manual efforts to dilate the cervix, but had wisely refrained from instrumental interference. I went to her at their call accompanied by Drs. R. P. Harris, and Prof. Gardner, of Montreal, who were visiting me at the time. We found the patient profoundly collapsed, with a thready pulse of 142.

The pelvic measurements were: sp. i. 19 cm., cr. i. 25 cm., external conjugate d. B. 15 cm. It was impossible to measure the diagonal conjugate as the pelvis was choked by dense inflammatory masses, in the middle of which the small rigid cervix was embedded. The indication was plain that, without any reference to the condition of the child, the only chance for the mother was Cæsarean section. The child's heart was heard

beating very feebly in the left flank The house was a two-story frame building, in an alley in a densely crowded poor part of the city.

I operated with instruments brought from my hospital, and sterilized hands and cloths and field of operation with a bichloride solution, during the operation using nothing but hot boiled water.

The operation was completed, down to the dressing of the abdominal wound in thirty-five minutes. The uterine incision struck the placenta (*plac. prœv. Cæsar.*), and pushing this to one side the child's feet were grasped, and the body readily delivered. The head, however, stuck below the contraction ring, and only yielded to continued careful traction, assisted by inserting the finger in the mouth. The child was handed to Prof. Gardner profoundly asphyxiated; he resuscitated it in a half hour to a feeble vitality. It died of icterus at the end of a week.




U. Contracted uterine body. C R. Contraction ring. C L. Clots of blood accumulated in upper dilated cervical canal, and below the contraction ring L C. Lower undilated part of the cervix. V. Vagina.

Twelve deep and twelve superficial sutures of silk were used in the closure of the uterine wound. No constriction was used upon the uterus during the operation, and no drainage was used after. The head of the child must have obstructed the rectum, for upon the day following the operation she received a dose of salts, which brought away an enormous movement filling a ped-pan.

Her pulse on the third day was 88 and her temperature normal.

She progressed without fever or distress until the contused tissues in the vagina began to break down. I then discovered that between the contraction ring and firmly contracted portion of the uterus above, and the undilated rigid infra-vaginal cervix below, in the pocket thus in the cervical canal in which the head had lain, a mass of clots had accumulated and become decomposed (see figure); this I had to wash out carefully every day. The vaginal cervix then broke down and came away in a large, crackling, emphysematous mass. Physometra also existed, until, with the breaking open of the abdominal wound and part of the uterine wound, the air discharged and I was able to syringe from above downward through the vagina. In spite of all this local disturbance her general condition was not affected, and she improved daily. In two weeks, as predicted by Dr. Harris, a mild phlebitis occurred. She now comes to my office perfectly well with a small utero-abdominal fistule through which she menstruates. The last successful case in Philadelphia was performed fifty-one years ago by Prof. Gibson.

My second case was performed on a relative indication. The mother had had two children killed in difficult labors and one very small child born living with great difficulty. She had a well-developed fœtus in utero, which I could easily have delivered by craniotomy; but at her urgent request, with all the backing of the best care in my hospital, I readily consented to attempt to save both lives. She was seen by my friends, Drs. R. P. Harris and C. P. Noble, who concurred with me in my opinion.

She was operated upon shortly after the beginning of labor. The operation lasted thirty-two minutes to complet on of abdominal sutures. The child weighed within one ounce of seven pounds. She made an excellent recovery, also interrupted by phlebitis, and both mother and child are living to-day perfectly well.

I feel with Dr. Lusk that all the honors in this great renovation in Cæsarean section statistics are due to my friend, Dr. Sänger, of Leipzig, and I am sure that much of the contest for priority in this field would be avoided if writers would bear in mind that Sänger has never claimed the merits of *invention*, but of *discovery;* he was the first and the only surgeon who, by an elaborate scientific analysis of all cases in all countries, succeeded in

showing the world what among the vast number of conflicting statements were the essential factors of success.

The revolution in the results following this book of Sänger's, appearing in 1882, has been wonderful.

The operation as thus presented in its new form is simple, and I have prepared the following formula of the various steps as giving a brief but fairly complete *résumé* of the technique.

First step. Preparatory treatment of patient by baths, antiseptic vaginal douches, shaving genitals, careful attention to diet, and regulation of the bowels.

Second. Time to operate in cases of election on the border between the first and second periods of labor.

Third. Perfect aseptic condition of instruments, patient's abdomen and cloths surrounding field of operation upon which instruments lie or with which hands come in contact, by painstaking use of antiseptics beforehand, maintained by use of pure sterilized water during the operation.

Fourth. Abdominal incision above and below the navel over the most prominent part of the uterus. Bleeding vessels in abdominal walls clamped, larger vessels tied with catgut.

Fifth. Uterus left *in situ* until the child is extracted, when it can be delivered through the abdominal incision much reduced in size, emptied of amniotic fluid, fœtus, placenta, and membranes.

Sixth. Incision into the uterus about the middle, rather more toward the fundus, in a line directly under the linea alba, about fifteen centimetres in length. Lengthen upward.

Seventh. Separation of membranes from uterus before breaking them not necessary.

Eighth. Amnion emptied through abdominal walls kept from entering abdomen by hands of assistant pressing the walls close down on to the sides of the uterus.

Ninth. In placenta prævia Cæsariana do not cut the placenta. Separate to its margin and perforate membranes.

Tenth. Extract child always by feet if possible.

Eleventh. In emptying uterus carefully lift out placenta and membranes intact. Do not spend time scraping or picking off shreds of decidua.

Twelfth. Uterus now brought out of the incision and laid upon a cloth.

Thirteenth. Hemorrhage in uterine incision or from placental site best checked by hands of assistant grasping the neck of the uterus, or by clamping a provisional rubber ligature laid around the neck of the uterus. Do not ligature too tight or leave ligature on long.

Fourteenth. Intestines retained either by cloth laid over incision under uterus, or by long sutures through the upper part of the abdominal wound, or by drawing opposite edges of wound together and clamping with several pairs of forceps.

Fifteenth. Antiseptics in the uterine cavity are of very doubtful utility. Iodoform powder may limit secretion.

Sixteenth. Suture material for the uterus. Well-disinfected silk is the best. (Silkworm-gut has been used in but one case by Fasolo. Chrome catgut was used by Sänger, and ulcerated out after several months. I examined the piece and found a perfect loop and knot entirely unabsorbed. Silver wire is more difficult to handle and catgut is dangerous.)

Seventeenth. Sutures of uterus deep and superficial, the deep embracing serosa and muscularis down to the decidua, thesuperficial catching only the serosa. Do not grasp too much of the serosa.

Eighteenth. The number of sutures should be about nine deep and eighteen superficial. Do not err to the opposite extreme of using too many sutures, especially deep. The order of placing and tying is indifferent.

Nineteenth. Peritoneal toilet. Carefully cleanse the uterus now ready to be returned to the abdomen. Raise the lower angle of the wound in the abdominal wall and cleanse the vesical pouch, and the pockets in front of the round ligaments, then tilt the uterus forward and slowly and carefully cleanse Douglas's pouch, when the uterus is dropped back and a sponge or cloth laid under the abdominal incision until all the sutures are passed.

Twentieth. Drainage is very difficult, and with proper antiseptic care is unnecessary.

Twenty-first. Omentum drawn over the uterus and the abdominal wound closed with any suture material to which the operator is accustomed. I think in cases in which septic infection is feared

it is best not to pull down the omentum, as the adhesion of the uterus to the abdominal wall is conservative. Put on a permanent dressing.

Twenty-second. Time occupied in operation. This can only be a matter of serious importance in case of great exhaustion, or enfeebled vitality, as in cancer cases, or excessive hemorrhage. Everything needed should be at hand so that no unnecessary delay occur between the steps. (Prof. Gibson in his first operation upon Mrs. Reybold, working without an anæsthetic, finished in ten minutes, without closing the uterine wound.)

Twenty-third. The after-treatment is most important. Having conducted the steps with precision, and secured an aseptic condition of the uterus, peritoneum, and wounded surfaces, the patient should pass through a perfectly normal puerperium. She must lie in a perfectly clean bed on cloths frequently changed, and the slightest foulness of odor or symptom of sepsis combated with very carefully given uterine douches.

The urine should be drawn for two days.

She should nurse the child if possible.

The stitches should be removed from the eighth to the tenth day, and the patient should rise in three weeks. She should long abstain from exertion or lifting.

Observation: Cæsarean section cases should be watched with extreme care during subsequent pregnancies, when labor may be conducted by being induced prematurely, or by turning, or by a repetition of the Cæsarean operation, watching with especial care to avoid the dangers of rupture.

As yet, no case of rupture has occurred in pregnancies subsequent to the Sänger method; several cases have already been operated upon twice.